

**DECLARATION FOR UTILITY OR
DESIGN PATENT APPLICATION
(37 CFR 1.63)**

☒ Declaration Submitted with initial Filing

☐ Declaration Submitted after initial Filing (surcharge (37 CFR 1.16(e)) required)

Attorney Docket No.: 5750-17

First Named Inventor: Halvorsen, Yuan-Di C.

COMPLETE IF KNOWN

Application Number: To be assigned

Filing Date: May 19, 2000

Group Art Unit: To be assigned

Examiner Name: To be assigned

As a below named Inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

DIFFERENTIATION OF ADIPOSE STROMAL CELLS INTO OSTEOBLASTS AND USES THEREOF

the specification of which

☒ is attached hereto
OR
☐ was filed on December 1, 1998 as PCT International Application Number PCT/US98/25449.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code § 119 (a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365 (a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				Yes	No
N/A			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority sheet attached hereto:

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet attached hereto.
60/067,334	12/02/1997	

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)
PCT/US98/25449	12/01/1998	W099/28444

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority sheet attached hereto.

As a named inventor, I hereby appoint the practitioners associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith, and direct that all correspondence be addressed to that Customer Number:

Customer Number 000826

Direct correspondence to the attention of and telephone calls to:

Robert E. McCarthy
Registration No. 46,044
ALSTON & BIRD LLP
Post Office Drawer 34009
Charlotte, NC 28234
Tel. Raleigh Office (919) 420-2200
Fax Raleigh Office (919) 420-2260

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application of any patent issued thereon.

Full name of first inventor: Yuan-di C. Halvorsen

Inventor's

Signature: Yuan-di C. Halvorsen

Date: 5/5/2000

Residence: Holly Springs, NC

Citizenship: Republic of China

Post Office Address: 5128 Salem Ridge Road
Holly Springs, NC 27540

RTA01/2077354v1

Atty. Docket No.:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Yuan-Di, C. Halvorsen

Serial No.: 09/554,868

Art Unit: 1614

Filed: May 19, 2000

Examiner: N/A

For: Differentiation of Adipose Stromal Cells into Osteoblasts and Uses Thereof

Assistant Commissioner for Patents
Washington, DC 20231POWER OF ATTORNEY, REVOCATION OF PRIOR POWERS AND CHANGE OF
CORRESPONDENCE ADDRESS

Sir:

As Assignee of record of the entire interest in the above-referenced application, I hereby revoke all previous powers of attorney or authorizations of agent given in the above-identified application. I hereby appoint the following attorneys or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

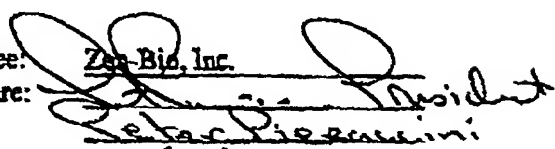
Sherry M. Knowles, Reg. No. 33,052
Steven P. Wignmore, Reg. No. 40,447
Lisa K. Norton, Reg. No. 44,977
Clark G. Sullivan, Reg. No. 36,942
Holmes J. Hawkins, Reg. No. 38,913

W. Scott Petty, Reg. No. 35,645
Curtis L. Doster, Reg. No. 41,714
Charles Varnhagen, Reg. No. 43,315
Hoang M. Vo, Reg. No. P-47,158

Please change the correspondence address for the above-identified application to:

Sherry M. Knowles, Esq.
King & Spalding
191 Peachtree Street
Atlanta, Georgia 30303-1763
(404) 572-3541
(404) 572-5145 facsimile

Assignee: Zen Bio, Inc.

Signature: 

Name: Robert J. Piccinini

Date: 12/14/00

Army Docket No. 08140.105001

ASSIGNMENT OF LETTERS PATENT AND INVENTIONS

WHEREAS, ZEN-BIO, INC, a corporation of the State of North Carolina, having its principal place of business at 3200 Chapel Hill-Nelson Blvd., Suite 102, Research Triangle Park, NC 27709 (hereinafter "ASSIGNOR"), owns certain inventions and improvements disclosed in the following United States Patents and Patent Applications:

Serial No.	Entitled	Filed or Issued
60/067,334	Osteoblast Development and Use	12/2/1997
60/149,849	Multiple Mesodermal Lineage Differentiation Potentials for Adipose Tissue-Derived Stromal Cells and Uses Thereof	8/19/1999
60/149,850	Use of Adipose Tissue-Derived Stromal Cells for Chondrocyte Differentiation and Cartilage Repair	8/19/1999
6,242,200	Screening for SUR1 Antagonists Using Adipocytes	6/5/2001

WHEREAS, ARTECEL SCIENCES, INC, a corporation of the State of Delaware, having a place of business at 801 Capitola Drive, Suite 8, Durham, NC 27713 (hereinafter, "ASSIGNEE") is desirous of acquiring an interest in the same;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR by these presents does sell, assign and transfer unto ASSIGNEE the full, exclusive and entire right, title, and interest in and to said Patents and Patent Applications, in and to any priority applications, divisions, continuations, reissues, and reexaminations thereof, and in and to all inventions and improvements disclosed and described in Patents and Patent Applications; and ASSIGNOR hereby requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States resulting from a division, continuation, reissue, or reexamination thereof, to ASSIGNEE, as the assignee, for its interest and for the sole use and benefit of ASSIGNEE and its assigns and legal representatives.

Attny Docket No. 08140.105001

For the same consideration, ASSIGNOR by these presents does sell, assign, and transfer to ASSIGNEE the full, exclusive, and entire right, title and interest in and to any foreign patent or applications corresponding to said Patents and Patent Applications, in whole or in part, worldwide, in all countries including the United States, in and to any Letters Patent and similar protective rights granted on said foreign applications, and in and to the right to claim any applicable priority rights arising from or required for said foreign applications under the terms of any applicable conventions, treaties, statutes, or regulations, said foreign applications to be filed and issued in the name of ASSIGNEE, or its designee insofar as permitted by applicable law.

AND, for the same consideration, ASSIGNOR agrees to sign all lawful papers, execute all divisional, continuing, reissue, reexamination and other applications, make all assignments and rightful oaths, and generally do everything possible to aid ASSIGNEE, its successors, assigns, and nominees, to obtain and enforce proper protection for all said inventions and improvements in all countries throughout the world.

AND, for the same consideration, ASSIGNOR by these presents does sell, assign, and transfer to ASSIGNEE the full, exclusive, and entire right to sue for past infringement of said Patents worldwide, together with all claims for damage by reason of past infringement of said Patents, with the right to sue for, and collect the same for ASSIGNEE'S own use and enjoyment.

ASSIGNOR further agrees that all necessary records of ASSIGNOR to establish priority of invention in any interference or similar proceeding will be made available at no additional charge to ASSIGNEE, in the event such records are needed in connection with any of the assigned Patents or Patent Applications.

Attny Docket No. 08140.105001

IN WITNESS WHEREOF, the undersigned has caused this Assignment to be
executed by its duly authorized officers and its seal to be affixed, this 17th day of
December, 2001.

ASSIGNOR: ZEN-BIO, INC.

[Corporate Seal]

By: [Signature]

Its: President

Attny Docket No. 08140.105001

Certificate of Acknowledgement

STATE OF North Carolina
COUNTY OF Alamance

Before me, the undersigned attesting officer duly authorized to administer oaths, a Notary Public in and for the county aforesaid, on this 17 day of December, 2001, personally appeared Peter Pieraccini, to me known personally, and who, being by me duly sworn, deposes and says that he is the president of Zen-Bio, Inc., and that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors, and said Y. Renee Lea-Curie acknowledged said instrument to be the free act and deed of said corporation.

Y. Renee Lea-Curie
NOTARY PUBLIC

(SEAL)

My Commission Expires: March 5, 2006

ASSIGNMENT

THIS ASSIGNMENT, made by ZEN-BIO, INC., a corporation of the state of North Carolina, having its principal place of business at 3200 Chapel Hill-Nelson Blvd., Suite 102, Research Triangle Park, NC, 27709, hereinafter referred to as Assignor;

WITNESSETH: That,

WHEREAS, as shown by the records of the United States Patent and Trademark Office, Assignor has previously acquired all right, title, and interest in and to the United States patent and/or patent applications identified on the attached Schedule and in and to all corresponding patents and/or patent applications worldwide, and in and to the inventions represented thereby (all hereinafter referred to as the "Patents"); and,

WHEREAS ARTECEL SCIENCES, INC., a corporation of the state of Delaware, having its principal place of business at HQ Global Workplaces, 4819 Emperor Blvd., Durham, NC 27703, hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said Patents and in and to the inventions represented thereby; and

WHEREAS, the parties have agreed to the Assignment hereinafter set forth;

NOW, THEREFORE, To All Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the above Assignor has sold and by these presents does hereby sell, assign, transfer, and convey unto the said Assignee, its successors and assigns, its entire right, title, and interest in and to said Patents and the inventions represented thereby, and any and all continuations, continuations-in-part, or divisions thereof, and any and all Letters Patent or reissues, reexaminations, or extensions thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted, together with the right to claim priority in all foreign countries in accordance with the International Convention; all rights corresponding to said Patents in foreign countries throughout the world; and all of its rights to sue for past infringement of said Patents worldwide, together with all claims for damage by reason of past infringement of said Patents, with the right to sue for, and collect the same for Assignee's own use and enjoyment; all to be held and enjoyed by said Assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by Assignor if this assignment and sale had not been made.

From time to time after the date hereof, at the request of either party hereto, and at the expense of the party so requesting, each of the parties hereto shall execute and deliver to such

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requesting party such documents and take such other action as such requesting party may reasonably request in order to consummate more effectively the transactions contemplated hereby.

The Assignor further covenants and agrees that, at the time of the execution and delivery of these presents, it possesses full title to the inventions and Patents thereon as earlier identified, and that it has the unencumbered right and authority to make this assignment.

IN WITNESS WHEREOF, the Assignor has caused this assignment to be executed this 6th day of March, 2001.

ZEN-BIO, INC.

By: [Signature] (SEAL)

Its: President

STATE OF North Carolina

COUNTY OF Durham

This 6th day of March, 2001, personally came before me, Brenda J. Stecher, a Notary Public for said County and State, who, being by me duly sworn, says that he is President of ZEN-BIO, INC., a North Carolina corporation, and that the seal affixed to the foregoing instrument in writing is the corporate seal of said company, and that said writing was signed and sealed by him in behalf of said corporation by its authority duly given. And the said Peter Piezaccini acknowledged the said writing to be the act and deed of said corporation.

Witness my hand and official seal, this the 6th day of March, 2001.

(Official Seal)

[Signature]
Notary Public

My commission expires: July 23 2005

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

ZEN BIO, INC.
3200 Chapel Hill-Nelson Boulevard, Suite 102
Research Triangle Park, North Carolina 27709

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention in **"DIFFERENTIATION OF ADIPOSE STROMAL CELLS INTO OSTEOBLASTS AND USES THEREOF"**

as set forth in this United States Patent Application

- ☐ executed concurrently herewith
☒ executed on May 05, 2000
☐ Application No. ____; filed

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation, nonprovisionals, continuation-in-parts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

888-112-1100
0005 YAM 01 01/01/2000

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

5/5/2000
Date

Yuan-di C. Halvorsen
Yuan-Di C. Halvorsen

State of North Carolina
County of Wake

I, Debbie Whitaker, a Notary Public for said County and State, do hereby certify that Yuan-Di C. Halvorsen personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 5th day of May, 2000.

(Official Seal)

Debbie Whitaker
Notary Public
My commission expires _____ My Commission Expires August 29 2003

Attorney Docket No. 5750-17
RTA01/2077337v1

2000 MAY 05 11:00 AM